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ABSTRACT

This study of the effectiveness of transitional bilingual education (TBE) programs for Hispanic students in five Massachusetts school districts analyzed data on students' personal and educational characteristics (place of birth, socioeconomic status, number of years in TBE, district mobility, attendance, test scores, academic grades, and remediation). The student sample was comprised of 214 students in grades 1 through 12 and included TBE students, mainstream students who had previously been in TBE, and limited-English-proficient (LEP) students never enrolled in TBE. The major findings were: (1) the average time in TBE, current or previous, was about three years, with 9 percent in TBE more than three years; (2) although the majority of the students had attended schools only in their district, one third had attended at least three schools there, and one third had attended schools in their native countries; (3) the current TBE students had lower attendance than the mainstream students but higher attendance than non-TBE LEP students; (4) over 90 percent of the TBE and mainstream students had C averages or higher, while 42 percent of the non-TBE LEP students were failing; (5) several times as many non-TBE LEP students as others had repeated grades; and (6) although only 9 percent of the TBE students had been referred for special education, 12 percent of the mainstream and 26 percent of the non-TBE LEP students had been referred. (MSE)

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TRANSITIONAL BILINGUAL EDUCATION

IN MASSACHUSETTS:

A PRELIMINARY STUDY OF ITS EFFECTIVENESS

By
Catherine E. Walsh
and
Eduardo B. Carballo

Boston, Mass.
April 1986

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Transitional Bilingual Education in Massachusetts: A Preliminary Study of its Effectiveness

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TRANSITIONAL BILINGUAL EDUCATION IN MASSACHUSETTS: A PRELIMINARY STUDY OF ITS EFFECTIVENESS

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Executive Summary

In recent years, significant attention has been focused on the effectiveness of bilingual education, both at the state and national levels. Massachusetts has mandated transitional bilingual education (TBE) since 1971. But, while administrators, teachers, and parents attribute limited English proficient (LEP) students' success to TBE programs, little or no research exists in the state to confirm its effectiveness.

This study attempts to address this need by examining TBE program effectiveness for Hispanic students in five school districts in Massachusetts. The student sample was comprised of 214 grade 1-12 subjects and included TBE students, mainstream students who had previously been in TBE, and LEP students never enrolled in TBE programs. Data collection was primarily through a cumulative folder review which examined the following variables: place of birth, socioeconomic status, number of years in TBE, (including number of schools attented), district mobility, attendance, test scores, academic grades and remediation. Outlined below is an overview of the major findings.

OVERVIEW OF FINDINGS

Enrollment in TBE:
- -on the average, students in the 5 districts had been in TBE 3 years at the time of the study
- -mainstream students had been in TBE an average of 3 years before mainstreaming
- -19% of the sample had been in TBE 3+ years (10% 4 years, 7% 5 years, 2% 6 years)

Mobility
- -53% of the sample had attended schools only in their current district
- -33% had attended schools in their own country
- -14% had attended schools in other districts
- -34% had attended 3 or more schools in their current district

Attendance:
- -66% of the TBE students had high attendance (absent less than 20 days a year)
- -78% of the mainstream students had high attendance
- -only 58% of the control (LEP not in TBE) had high attendance

Academic Grades:
- -92% of the TBE students had an academic average of C or higher
  49% had an average between A and B
- -93% of the mainstream students had an academic grade of C or higher after an average of 2 years in the mainstream
  35% had an average between A and B after an average of 2 years in the mainstream
- -42% of the control were failing; no one had an average higher than B

Repeat Grades:
- -9% of the TBE students had repeated a grade
- -12% of the mainstream students had repeated grades
- -41% of the control students had repeated grades

Special Education:
- -9% of TBE students had been referred for special education
- -19% of the mainstream students had been referred for special education
- -26% of the control had been referred for special education

Introduction

As recently as the late sixties, one could walk the streets in Boston's Hispanic community during the school day and see hundreds of school-aged youth. In 1968, a Catholic nun who worked with the Spanish speaking community and was concerned about this problem, did a door-to-door survey in the neighborhoods to find out how many children were actually enrolled in school. Of the 350 Spanish speaking school aged children she found, 65% had never enrolled. Of the remaining 35%, many were habitual truants; even more had dropped out (Castellanos, 1984). A study conducted two years later by the Massachusetts Advocacy Center found that half of Boston's 10,000 Spanish speaking children were not in school (Massachusetts Advocacy Center, 1970). In 1971, only one Hispanic graduated from a Boston High School. Academic success for Hispanic students was virtually nonexistent.

Parents, educators, and community members fought long and hard in the late 1960's and early 1970's for the establishment of educational programs which would address the linguistic cultural, and educational needs of Hispanic youth. Their struggles were finally realized in November 1971 when Massachusetts enacted the first law of its kind in the nation, Chapter 71A, a law for Transitional Bilingual Education.

Chapter 71A requires school districts with 20 or more limited English proficient (LEP) students from a particular language group to provide academic content instruction in the students' native language while introducing the child to English through instruction in English as a second language (ESL). Classes in native culture/history as well as United States culture/history are mandated. Students' English language

skills are evaluated annually until such time that the student is ready to be mainstreamed to a monolingual (English) class; the law suggests a time frame of approximately three years.

Because of Chapter 71A, more non-English and limited English speaking students have had a reason and a purpose in going to and staying in school. In the past 14 years, large numbers of Hispanic and other language minority students have graduated from Massachusetts' high schools; many have gone on to college and to rewarding careers. While drop out rates, below grade level enrollment, and truancy remain high for Hispanic youth (Orum, 1985), individual school districts maintain that LEP Hispanic students enrolled in transitional bilingual education (TBE) programs are much more apt to remain in school (Walsh, 1983).

Administrators, teachers, and parents who have witnessed the new founded achievement of many LEP students argue that Chapter 71A has achieved its purpose of providing understandable instruction and a transition to English and has improved academic performance. However, few if any research studies have been conducted in the state to confirm TBE's effectiveness. The present study attempts to meet this need, if only in a preliminary way, by examining TBE program effectiveness for Hispanic students in five school districts.

While TBE programs currently serve 15 other major language groups besides Spanish, Hispanics remain the largest group at 59% (approximately 12,000 students). Thirty Two districts currently provide Spanish bilingual programs; most programs have been in operation for a number of years and are well established. This study provides an overview of five of these programs, examining characteristics of the student population, success indicators, and overall academic performance. Although the study cannot presume to generalize findings to other districts or to other LEP

populations, trends help provide insight into the overall effectiveness of transitional bilingual education for limited English proficient students in Massachusetts.

Purpose

The purpose of this study was to analyze, in a preliminary fashion, the effect TBE programs have had on the academic achievement and educational success of LEP Hispanic students in selected school districts in Massachusetts.

While TBE program have been mandated in Massachusetts since 1972, virtually no studies have examined their value in assisting LEP students to academically achieve, learn English, and, eventually succeed in mainstream classes. National and state officials often maintain TBE programs keep Hispanic students "isolated" in bilingual classes much longer than the suggested timeframe of three years. Many also contend that Hispanic TBE students are not learning English and, as a result, are not able to compete in the mainstream.

With these issues in mind, this study set out to closely examine a number of variables impacting on Hispanic students' performance. The goal was to investigate student progress within a framework broader than number of years in TBE or standardized achievement test scores, but, rather, one that takes into account students' background and educational histories. It is through this framework, that the study provides insight into both pedagogical and programmatic aspects of TBE programs and their overall functioning for Hispanic students in Massachusetts.

An Overview of the Literature on Bilingual Program Effectiveness

In recent years, national attention has been focused on the effectiveness of bilingual education. Proponents maintain bilingual programs help language minority students learn English and eventually succeed in the mainstream while opponents argue bilingual programs isolate students and do not teach them English. Although theoretical studies such as those of Cummins (1981, 1984), Hakuta (1986) and Wong-Fillmore (1983) demonstrate the psychological, linguistic, and cognitive benefits of bilingual education, policy makers continue to search for school based evaluations which describe whether or not particular programs actually work.

To investigate bilingual program effectiveness at the national level, the Department of Education commissioned the American Institute for Research Study (Danoff, 1978) and the Baker and DeKantor Report (1981). While these studies found bilingual programs as a whole to be uneffective in elevating students' performance in English and math, both have been dismissed as methodologically at fault (Cardenas, 1977; Gray 1977; 1978; O'Malley, 1978; Willig, 1981). Although some segments of state and national government continue to share these studies negative sentiments, findings from well controlled research at the local level do indicate that quality bilingual education programs are more effective than English only programs in promoting LEP students acquisition of English academic skills (Cummins, 1981; 1984).

In their review of nine research and three demonstration projects, Dulay and Burt (1979) found bilingual education to work significantly

better than monolingual programs for LEP students. Similarly, Troike (1978) reviewed 12 program evaluations and several research studies which suport the effectiveness of bilingual education.

The Rock Point Navajo Study (Rosier and Farella, 1976) found, for example, that before the implementation of bilingual education, Navajo students who received intensive ESL were two years behind U.S. norms in English reading by the end of grade six. After the establishment of bilingual programs, grade six students who had participated in the program throughout their elementary years were found to perform slightly above U.S. grade norms in English reading even though they had considerably less exposure to English.

In Santa Fe, New Mexico, Spanish bilingual students consistently performed significantly better in both reading and math as compared to their peers in English only classes. Students enrolled in the bilingual program three and four years were scoring at the national norm in English reading by grade five and stayed close to this norm in grade six. In math, this group surpassed national averages in grade four and were able to maintain an equal or superior status through grade six (Leyba, 1978).

In both the Rock Point and Santa Fe Programs, English instruction increased while native language instruction decreased but continued throughout the elementary years. Similar studies in Europe, the U.S. and elsewhere have found the cumulative effect of native language use to be a significant factor in improved student achievement.

Skutnabb-Kangas and Toukomas (1976) discovered in their studies of Finnish immigrant children in bilingual programs in Sweden, that by using Finnish as the major language of instruction until grade three but continuing its use throughout elementary school, Finnish students performance in both Finnish and Swedish improved significantly,

approximating that of Swedish speaking students in Swedish. Similarly, evaluations of bilingual programs in Canada (Cummins, 1983), Ireland (Cummins, 1978), Holland (Altena and Appel, 1982), Wales (Wijnstra, 1980) and Mexico (Modiano, 1968) have found that minority language students taught through their native language for all or part of the school day perform at least as well if not better in second language academic skills as equivalent students taught through the majority language (Cummins, 1984).

An evaluation of the Nestor Program in San Diego also had positive findings. Through a team teaching approach, both English and Spanish background students received instruction primarily through their native language. Instruction in the second language was increased gradually until, by grade four, approximately 50% of instruction was through each language. According to the program evaluation (Evaluation Associates, 1978), Spanish background students gained an additional .36 of a year's growth in English reading for each successive year they spent in the bilingual program. Spanish background students in the program five or more years tended to perform slightly better in English reading than the school average at the junior high level. In math, the grade six Spanish background children were over a year ahead of the Spanish speakers in the comparison district and only one month behind grade level (Cummins, 1981).

In studying Colorado bilingual programs, Egan and Goldsmith (1981) described the overall rate of LEP students academic progress as at least as good as that of English speakers. Moreover, in half of the 39 programs they examined, growth rates for LEP students in English academic skills were well beyond the normal expected rate for all students.

Results from studies like Egan and Goldsmith (1981), Evaluation

Associates (1978), and Leyba (1978) which examine the academic achievement of Hispanic students are especially significant since research has shown that Hispanics tend to fall progressively further behind grade level with each successive year they are in school. (See Cummins, 1984; Hansen, 1979; Orum, 1982; Zappert and Cruz, 1977).

For example, in his study of Spanish surnamed students not in bilingual programs in one large Colorado district, Hansen (1979) found students went from the 47th percentile in reading in grade three to the 37th percentile by grade six. In both language and math, there was a similar trend with scores going from the 47th percentile in grade three to the 30th in grade six. Hansen also reported that of 13 Colorado districts with Hispanic enrollments of over 50%, 8% had an average third grade reading achievement below the 50th percentile nationally. In 38% of the districts, sixth grade student average reading achievement was below the national average.

As Orum (1982, 1985) has pointed out, the academic divisions between Hispanic and non Hispanic students continue to increase throughout junior high and high school. One in five Hispanic high school students from non- English backgrounds is two years or more below grade level in school.

Studies which therefore show Hispanic students in bilingual programs to approximate the achievement of their monolingual peers exemplify success. According to Zappert and Cruz (1977), the nonsignificant effect of bilingual students learning at the same rate as students in monolingual classes is significant in and of itself because it demonstrates that learning in two languages does not interfere with a student's academic and cognitive performance. "Under these circumstances, a nonsignificant finding can be interpreted as a positive effect on

bilingual education" (Zappert and Cruz as cited in Troike, 1978: 11).

While academic achievement is one indicator of program effectiveness, a number of researchers have questioned reliance on test scores as the sole indicator of student and program success. Because Hispanic students continue to be overrepresented in drop out and absentee rates (Orum, 1982, 1985) and often have a higher level of mobility than students from other linguistic and ethnic backgrounds, programs which contribute to keeping these students at grade level, attending classes, completing high school, and entering some type of post-secondary program are making positive gains and are being effective even if test scores show them to be behind their English speaking peers.

Thus, when examining the effectiveness of bilingual programs, it is important to look at a number of success indicators which may impact on student performance. Development Associates (1984) and Troike (1978) found place of birth to affect performance of LEP students, with foreign born students tending to achieve better than those born in the U.S. Development Associates (1984) and Krashen (1979) also found age to be a factor (important since many Hispanic students are in grade placements below their chronological age). Because of differential language and home experiences, first grade LEP students were often cited as exhibiting below grade level proficiency in native language and English language arts and math but were found to frequently catch up by third grade (Development Associates, 1984). Troike (1978) maintains LEP students in bilingual programs have 10% better attendance than their peers in monolingual classes.

In their Significant Bilingual Instructional Features Study, Tikunoff et al (1983) found effective bilingual programs emphasize native language and culture instruction but also share characteristics with

other effective educational programs in general: strong focus on academics, high allocation of time to content, active teaching behaviors, high level student performance, efficient classroom management, and a congruence between teacher intent and organization of instruction.

Effective bilingual programs reinforce students' cultural identities, promote the development of native language and English proficiency and provide quality academic instruction which is relevant to students' experiences and needs (Cummins, 1981). Their effectiveness is measured by the performance and behaviors of students and by the level to which they assist LEP students to later compete in the mainstream and academically succeed.

DESIGN

Site and Sample Identification

Five school districts were selected during fall 1985. Site identification was based on two major criteria: (1) the presence of an established Spanish TBE program; and (2) the willingness of the superintendent and program director to participate in the study. An effort was made to have sites reflective of large urban, medium suburban, and small semi-rural districts as well as representative of different geographical regions of the state (see Table 1).

A total of 246 Hispanic grade 1-12 students were chosen from the five school districts. Of this number, it was possible to collect sufficient data on only 214. Table 2 describes this population and provides a program breakdown by site.

TBE students were randomly selected from student lists provided by program directors. Since all of the sites studied had larger TBE programs at the elementary (1-6) than the secondary (7-12) level, proportionally more students were chosen from this category.

Mainstream students were also selected randomly. In three of the five districts students were identified by means of lists provided by program directors. The remaining two districts, however, did not have such information compiled. In these cases, the researchers themselves went through program records, identified students, then randomly selected a sample. While lists and program records were, for the most part, regularly updated, frequent student mobility made it difficult to identify large student samples at some of the sites, particularly at the high schools.

TABLE 1

CHARACTERISTICS OF STUDY SITES

Setting	Site	Student Population	LEP Population	% LEP	Year Program Began	Program Sponsorship	% Subsidized or free lunch
Semi-rural	Attleboro	5,500	109	2%	1976		21%
Urban	Cambridge	8,000	600	7.5%	1972	Title VII	50%
Suburban	Framingham	8,000	230	3%	1972	Title VII	13%
Suburban	Haverhill	6,100	137	2%	1972		30%
Urban	Holyoke	6,582	1,325	20%	1972	Title VII	56%

TABLE 2
Sample Population by District

DISTRICT	TBE			MAINSTREAM					CONTROL
	Grades		Total	1-3 YRS		3+ Years		Total	Grades
	1-6	7-12	TBE	1-6	7-12	1-6	7-12	MS	1-12
Attleboro n=27	9	7	16	7	1	1	2	11	0
Cambridge n=41	13	12	25	4	0	0	1	5	11
Framingham n=47	16	11	27	8	5	0	5	18	3
Haverhill n=44	13	5	18	6	3	1	8	18	8
Holyoke n=55	35	8	43	5	2	0	0	7	5
Totals by Program n=214	86	43	129	30	11	2	16	58	27

MS = mainstream

Attempts were made in all of the districts to identify two major groups of mainstream students at both the elementary and secondary levels: (1) those in the monolingual English program one to three years and (2) those in three years or more. As Table 2 indicates, there were few students in this latter category.

In addition to the 187 TBE and mainstream students selected, 27 "control" students were identified. These students had been characterized by the district as LEP when they entered school but, because of parental request or other reasons had never participated in a TBE program. Because of the limited number of students identified by program directors to be in this category, selection was based purely on verification of parental request, language proficiency information, and/or other supporting documentation.

In selecting TBE, mainstream, and control subjects, efforts were made to identify students not in special education. However, it was not until we went through student folders that we discovered some of the subjects were, in fact, receiving special education services. Because of the randomness in which this occurred, these subjects were retained in the sample.

Methodology

Data collection was primarily comprised of a cumulative folder review. Based on studies by Development Associates (1984), Orum (1982), Tikunoff et al (1983), Troike (1978), student, instructional, and institutional based variables were identified as of interest. At the student level these included: place of birth, number of years in TBE, socioeconomic status (free or reduced lunch), number of schools attended, district mobility, attendance, remediation, achievement test scores, and academic grades.

Both oral and written interviews were conducted with program directors in order to ascertain such instructional criteria as percentage time allocated to native language (L1) and second language (L2) instruction, student grouping, instructional methodology, transition from L1 to L2, and native language and/or ESL support to students in the mainstream. Also asked were questions regarding institutional criteria like entry, placement, and exit standards, staff development, curriculum, quality and availability of materials, presence of bilingual support personnel, parent involvement, and integration of TBE into the system.(#1) TBE program impact on percentages of drop outs, high school, graduates and students going to college were also discussed.

District Profiles

Attleboro

Overview

The Attleboro Public Schools is a small semi-rural school system with a student body of approximately 5,500 students K-12. About 109 of these students are classified as limited English proficient and are participating in Transitional Bilingual Education Programs (see Table 1). The 109 students represent three different language groups: Spanish, Cambodian, and Portuguese. The Spanish Bilingual Education Program, in operation since 1976, services 45 students, with 35 students at the elementary K-8 level, and ten students at the secondary 9-12 level. The program is housed in one elementary school, Thacher Middle School, and at Attleboro High School.

Program Goals

1. To attain appropriate level of academic achievement through the use of native language.

2. Maintain a gradual increase in the use of English language so as to perform ordinary classwork in English within three years.

3. To provide every child with the opportunity to develop his/her abilities and talents to the optimum.

4. To stimulate positive attitude so that each student can realize his or her potential.

5. To nurture the understanding of the democratic principals necessary to participate in a democratic society.

Curriculum

The Attleboro TBE Program's curriculum has been developed primarily by classroom teachers in all subject areas. Commercially

available materials are adapted and used by the staff. Teachers have also developed their own tests of comprehension, writing and oral production.

Instructional Methodology

Attleboro uses the one teacher model. In almost all cases, the bilingual teacher provides both native language and ESL (English as a Second Language) instruction. Teachers group students by English language levels. In the lower grades, reading is taught in the native language first and increasingly in English. In the upper grades, the teacher utilizes the native language as necessary, gradually increasing the percentage of English over a three year period. The breakdown of L1 (native language) and L2 (English as a second language) is as follows: first year students receive approximately 80% of their instruction in the native language, second year students receive approximately 50%, and third year students approximately 20%. These guidelines apply to the teaching of native culture/history, reading, writing, math, and science at the elementary level, and at the secondary level to native culture/history, reading, writing, and math only with native language support support for all other subject matter. The scope and sequence of the regular program curriculum provides a guide for the study of culture/history of the United States.

Students are grouped by ability levels in language and subject matter in combined or multi-grade classrooms of two or three grades. Individualized instruction is key. Older illiterate students receive more ESL instruction with special tutoring provided. Chapter I remedial instruction is available in English only and some special needs assistance in the native language is provided.

Entry/Exit Criteria

Attleboro's identification process begins with the referral of students suspected of having problems in classroom work in English from neighborhood schools. The interviews are conducted by the bilingual teacher with the student and his/her parents. Language tests and observations are then conducted. Instructional levels are determined by the teacher and principal after a record and transcript review. Additional testing is done if there are no previous records to determine educational level. Students are generally placed by age at the appropriate grade level.

Mainstreaming to the monolingual program prior to the third year is done only when English skills are at grade level. Additional time needed in the program after the third year is based on teacher and program director recomendations.

Cambridge

Overview

The Cambridge Public Schools is a large urban school system with approximately 8,000 students K-12. About 600 of these students are classified as limited English proficient and participate in Transitional Bilingual Education Programs in four different languages: Spanish, Portuguese, Haitian/Creole, and Chinese (see Table 1).

The Spanish Bilingual Education Program services 154 students, with 101 at the elementary level (Longfellow School) and 53 at the high school. In addition, the district provides 68 Hispanic students enrolled in the monolingual program with ESL instruction through ESL centers located in some of the city's schools. At the elementary level, most of the TBE Programs have been at their present school since the implementation of the program in the fall of 1972 and are well integrated within the system. At the secondary level, the district maintains a Bilingual Department with a Department Head, thereby giving the program the same level of status and prestige as other departments in the high school.

Program Goals

1. To teach required subjects (Math, Science, Social Studies, etc) in the native language of the child.

2. To teach the reading and writing of students' native language and to provide instruction in the native history and culture.

3. To help the student to orient themselves to life in the new country by providing instruction in American history and culture.

4. To teach oral comprehension, speaking, reading and writing in English as a second language.

5. To facilitate transition into regular monolingual classrooms.

6. To enhance the self-esteem of students and parents of diverse

cultural backgrounds and to develop and further a mutual respect for the values, attitudes and goals of all persons in a multi-cultural community.

Staff Development

The school district provides specific program relative activities via departmental meetings after school and release time during the course of the school year. Administrators, and teachers are also authorized to attend and participate in state and National conferences. In addition, the bilingual program offers summer curriculum workshops which address curriculum assessment, development, and revision needs of the program and the district.

Curriculum

The Cambridge Bilingual Program has developed curriculum guides for both elementary and secondary programs; all curriculum parallels that used in the monolingual program. Although most of the materials have been district developed, teachers have also acquired many other commercially developed books and materials.

Over the last few years Cambridge has been able to obtain several Title VII grants which have addressed program needs in the area of curriculum. Two examples of recent efforts are: (1) a grant for "Basic Skills for Transitioning" which has provided for the development of language strategies units for basic skills, now being field tested in bilingual classrooms and; (2) a grant for "Instructional Technology" which has provided high school program students with basic academic training and training in technical business and office education skills. Activities are geared to improve students' self-concept and their career awareness and have included peer tutorial programs.

Instructional Methodology

Cambridge utilizes a two teacher model in which separate staff are designated for L1 (native language) and L2 (English) instruction. At the kindergarten level, however, teachers are responsible for instruction in both languages.

The percentage of L1/L2 language instruction varies for each child and is based on students' individual needs as determined by a team of administrators and teachers twice annually. The percentage of native language instruction varies from 25% to 90% depending on the child's linguistic needs. The process is a gradual one: as students master the skills in the L1 they are gradually transitioned into the English language until 75-80% of their instruction is in English. Partial mainstreaming is introduced at this stage. The program follows a scope and sequence structure required by the district which stresses basic skills (computation and literacy). Chapter 1 remedial instruction in math and reading is provided. When required, special education is also provided in the native language.

Entry/Exit Criteria

Initial identification takes place via a Home Language Questionnaire and a language survey. All students potentially identified as LEP are referred at the elementary level to the Bilingual Assessment Center or, at the high school level, to the Bilingual teacher-in-charge of House D at Cambridge Rindge and Latin High School. Students are then further assessed for language dominance. Once Lau category is determined and the student is assigned in a full-time program, additional assessments are administered. Throughout their enrollment in the bilingual program, students continue to be monitored in language and basic skills.

Students' progress is evaluated based on the following exiting criteria at the elementary level:

Test	Date Given	Description	Grade	Acceptable Ranges
CTBS	March 1-12	Achievement Reading and Math	1-8	At or approximating grade level
Native Language CLOZE	Sept May Pre-Post	Reading Test	2-8	At grade level
English CLOZE	Sept May Pre-Post	Reading Test	3-8	At grade level
Language Continuum	April	Language skills test in English and Native Language	K-12	Lau C
Math Computation test	Sept May Pre-Post	Math	1-8	At or approximating grade level
CTBS (Spanish Portuguese)	March 1-12	Reading & Math	1-8	At grade level
Writing sample	Sept May Pre-post	Writing sample in in English & native language	2-8	Comparison of Pre-Post samples for growth.

At the Secondary level

Test	Date Given	Description	Grade	Acceptable Ranges
Language Skills continuum	Dec-May	Lang. Dominance Pre-Post Test	9-12	Lau C
CTBS	April	Achievement English & Math	9-12	At grade level or approximating grade level
Comprehensive Language Exam	Jan-June	Reading Writing Listening Speaking in English	9-12	Passing grade and completion of ESL VI (course)

In May, a review meeting of pertinent staff is conducted for each TBE student. Progress in all areas is reviewed and a recommendation is made for the next school year. Third year or students slated for exiting the bilingual program are tested with the Language Continuum Instrument (#2). Those students who fall within acceptable ranges and receive teacher recommendations are transferred to the monolingual program.

Framingham

Overview

The Framingham Public schools is a large suburban school system in Central Massachusetts with approximately 8,000 students K-12. About 230 students are classified as limited English proficient, and are participating in Transitional Bilingual Education programs (see Table 1). The 230 students represent two language groups, Spanish and Portuguese. The Spanish Bilingual Program services 184 students, with 173 at the elementary level, and 13 at the secondary level and has been in operation since 1972.

Framingham supplements its TBE program with a Title VII grant (new this year) for development of a pre-school program, and has been able to develop excellent parental involvement as a result. In addition, the Framingham Public Schools has initiated 2 other projects to improve services to LEPS:

Collaborative Enrichment Program for Linguistic Minority Students: TBE/ESL Program at Farley/Framingham State College. The major objective of this eight month project is to provide the students with an enrichment program which will improve their English language and basic math/science skills, while, at the same time, introducing students to the resources available at Framingham State College. During the course of the eight months, the students participate in presentations designed and implemented by TBE/ESL Program staff and by faculty from the College's science and health-related departments, including physics, chemistry, biology, home economics, nursing, computer science and math.

Collaborative Project: TBE/ESL Program at South High School/Massachusetts Bay Community College. The focus of the project is a Science/Health careers exploration program for LEP students

enrolled in grades 11 and 12 who are interested in post-secondary education in the science and/or health fields. The project is designed build academic preparedness to enhance opportunities for transition for the LEP student into college level science/computer and health careers and to build academic preparedness.

Program Goals

The Framingham Public School TBE Program is designed to provide a full-time meaningful education for children of Limited English Proficiency regardless of language, age or level of achievement. It is dedicated to utilizing, preserving, and directing the student's language, academic language and pride in his/her native history and culture while teaching them English and an understanding of the culture and history of the United States.

1. The student will be able to speak, comprehend, read and write English thereby providing them with the tools to secure gainful employment or to continue their education in a predominantly English speaking society.

2. TBE students will develop and/or maintain their compentency in speaking, reading, and writing in their native language.

3. TBE students will use their native language and English to increase their knowledge and skills in all academic areas.

4. TBE students will learn about and have respect for their own cultural heritage and the cultural heritages of other groups.

5. TBE students will develop positive attitudes toward school and school related activities.

Staff Development

The Framingham Public Schools provides regularly scheduled release days throughout the academic year for inservice training. The TBE director utilizes different available resources for training i.e.,

BEMSC (Bilingual Education Multifunctional Support Center), DOE (Department of Education, State), Title VII, DOE Regional Centers, and other support centers with appropriate presenters. Project Pride (a Title VII parent training project) provides training to staff on how to work with parents.

Curriculum

A comprehensive bilingual curriculum was developed as the result of a three year commitment (1976, 1977, 1978) by a Summer Workshop Curriculum Development Committee comprised of members of the program staff with further expertise provided by a curriculum consultant. The curriculum guides include the areas of Language Arts (Spanish), English As a Second Language, Mathematics, Science and Social Studies. Content area parallels that of the standard curriculum, but also includes elements of culture. Components of the curriculum have been reviewed periodically (1979, 1983, 1984) and have been adjusted and/or updated to coordinate with changes which have occured in the standard curriculum.

Instructional Methodology

The TBE Program has two distinct elements: 1) a K-3 program for those LEP students entering in Kindergarten, first or the early part of second grade and 2) the component for newly arrived non or limited English proficient students who enter in the latter part of second grade through grade 6 at the elementary level, grades 7 and 8 at the middle school, and grades 9-12 at the high school.

Both Programs utilize the first language of the student as the medium of instruction in all subject areas to the extent necessary to ensure academic progress and concept attainment. Since the instructional aim is to convert gradually from the use of the native language to the English language medium of instruction, students are

provided opportunities, such as in mathematics, to transfer skills from the native language to English.

The Framingham TBE Program does not subscribe to the usage of precise percentages since the degree of native language instruction in the student's program schedule is dependent upon the individual student's language and total academic needs. Thus, while no specific percentage of time can be regarded as fixed, the general guidelines for the non English speaker provide initially for 80-90% native language instruction and 10-20% ESL instruction, with a gradual decrease in the proportion of L1 and an increase in L2 as the student progress along the continuum of English language acquisition.

Within the self contained TBE classrooms, students are grouped for instruction according to their language and ability levels in each of the academic subject areas. Content material is adapted and presented at the students varying levels to permit each student to perform at his/her current skill level.

In the English As a Second Language/English Language Development (ELD) pull out component, there are three levels of CORE offerings: Beginner, Intermediate and Advanced.

Entry/Exit Criteria

At the time of entry, LEP students are assessed through locally developed instruments (see Overview of Evaluation Instruments, next page). In addition, an individual interview is conducted with the student in his/her native language by a qualified bilingual person to determine the student's language dominance/preference, provide a cross check with the Home Language Survey Information, and to obtain information regarding attitudes and interests. An interview is also provided in English by a qualified ESL person(s) to assess the students proficiency in the aural, oral, reading and writing aspects

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of the English language. Once the students documents have been evaluated, the interview completed, and the results of the examination of student records and language dominance and proficiency levels completed, the student is placed in the appropriate chronological grade and level of the TBE Program.

During the Spring (April/May) of each academic year, all TBE students are evaluated for proficiency/achievement in English by means of a combination of classroom observation by the teacher(s) and formal assessment instruments as described below:

	UNDERSTANDING	SPEAKING	READING	WRITING
K	Teacher classroom assessment	Teacher classroom assessment		
1st-12th	ESL Test & Teacher classroom assessment	ESL Test and Teacher classroom assessment	Metropolitan Reading Survey (1978)	Writing based on picture stimulus

All students in the TBE Program who have achieved a level of English proficiency as measured by academic performance, achievement, and assessment will be elegible for transfer to the standard curriculum. However, no student may be mainstreamed from the TBE Program to the standard curriculum prior to three years of enrollment,

except under the following conditions:

1. Upon teacher recommendation, Parent(s)/Guardian(s) input and written consent, and approval of the Bureau of TBE, Massachusetts Department of Education

2. The Parent(s)/Guardian(s) signs a Waiver of Services Form which is placed in the students cumulative folder, and a copy maintained in the TBE Program office.

Should a student who transfers out of the TBE Program prior to 3 years continue to demonstrate limited English proficiency, he/she may be re-enrolled in the program for a length of time equal to that which remained at the time of transfer.

All mainstreaming must take into account the following:

-Teacher recommendation

-Result of annual examination

-Parent Input

-On going academic achievement and classroom performance

-Years in TBE Program

-Pupil attitude

Unlike many other districts, Framingham offers an extra year of ESL support to first year mainstream students (providing students remain in the same school they attended for TBE).

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OVERVIEW
INITIAL EVALUATION INSTRUMENTS (ENGLISH)

GRADE LEVEL	SYNTAX	VOCABULARY	READING	WRITING	DOMINANCE
K	Framingham Kindergarten ESL Test and/or 6 Preliminary Questions	Framingham Kindergarten ESL Test and/or Framingham Picture Dominance	(aural story comprehension Framingham Kindergarten ESL Test		Framingham Picture Dominance Test K and 1st
Gr. 1-3	7 Preliminary Questions and/or informal interview with verb scan	Framingham ESL Vocabulary Screening	Informal Reader Survey	Writing sample	2nd - 12th Framingham Dominance Scale - R
Gr. 4-12	7 Preliminary Questions and/or informal interview with verb scan	Framingham ESL Vocabulary Screening	Informal Reader Survey	Writing sample	

INITIAL EVALUATION INSTRUMENTS (NATIVE LANGUAGE)

Grade Level	Oral Lang.	Reading	Lang. Arts/ Vocabulary	Writing	Math	Dominance
K	Standard Framingham K-Screening administered in native language		Standard Framingham K-Screening administered in native language			Framingham Picture Dominance Test K and 1st.
Gr. 1-12	Informal interview combined with classroom observation by teacher	Program developing passages for each grade level Classroom observation by teacher	Program developed language arts exercises for each grade level Classroom observation by teacher.	Writing Sample	Program developed Math assessment exercises.	2nd - 12th Framingham Dominance Scale -R.

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Haverhill

Overview

A small suburban school system, the Haverhill Public Schools, has a student body of approximately 6,100 students K-12. About 137 students are enrolled in the system's only Transitional Bilingual Education Program, Spanish (see Table 1). The TBE Program services 116 students at the elementary level K-8, and 21 students at the secondary level 9-12 and has been in operation since 1972. Students are housed in three buildings: K-5 at the Tilton, 5-8 at the Constentino, with grades 9-12 at Haverhill High School.

Program Goals

1. To educate LEP students to the extent that, they are able to make the transition from the TBE Program to the standard curriculum, and are able to compete effectively with their monolingual English speaking peers.

2. To promote inter-cultural understanding.

3. To promote student success through enhanced self esteem and cultural awareness.

Staff Development

Staff pre-service workshops are provided to Haverhill bilingual teachers in the summer. During the school year, staff meetings are held to discuss program issues twice each month. During these meetings, videotapes, and other workshops training related to the program needs take place.

Curriculum

The Haverhill TBE Program recently revised its curriculum guides for all grade levels and all subjects but continues to use commercial materials in reading, culture, and ESL. At the elementary level, the "Idea Oral Language Program" is used and the "Idea Proficiency Test"

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results are used to level instruction within that series. At the secondary level, students receive instruction via a number of texts commercially published for the areas of grammar, writing, and literature.

Instructional Methodology

The method of instruction in the Haverhill TBE Program is through a one teacher model at the elementary level, which calls for the bilingual teacher to teach both the native language as well as the ESL component. At the secondary and middle school level, a bilingual and an ESL teacher provide this instruction.

Haverhill uses a gradual process of introducing instruction in English. Although instruction is individualized, the general guidelines for first year students is 25% English, and 75% Spanish. During the second year, amounts of English increase to 50% while Spanish decreases to 50%. In the third year, instruction in English increases to 75% and Spanish is used 25% of the time. However, the actual percentage of L1 versus L2 differs for each student depending on the students ability to acquire English. For second and third year students, instruction via English is immediately followed up in Spanish when students request it or if the teacher feels it is necessary.

Students at the elementary level are grouped for language by degree of proficiency and level of reading. Partial mainstreaming usually happens after the second year upon the recommendation of the teacher. At the secondary level, students are leveled for instruction using commercial and teacher-made tests. Mainstreaming is also based on teacher recommendation.

Supplemental Chapter 1 is provided in English only if the student is able to benefit from the help. The district has a bilingual

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learning disabilities specialist.

Entry/Exit Criteria

The Haverhill TBE Program requests that parents of all new students fill out a form indicating whether the child has a language other than English. If the student's first language is not English, a certified bilingual teacher evaluates the student for language proficiency in the areas of listening, speaking, reading and writing. Interviews with parents and students are conducted, and previous school records if available are reviewed. Based on this information, a determination is made as to whether the student can perform ordinary classroom work in English.

The students are annually tested in the English language at every level using the following instruments:

	Elementary	Secondary
Speaking & understanding	Idea Prof Test	BAHIA oral lang test (BOLT)
Reading	Holt and Laidlaw Reading test	Modern American Eng. (Regents) level tests
Writing	Boston Public School Writing Assessment	Boston Public Schools Writing Assessment

Program staff, standard curriculum teachers, and principals review grades, performance, and test results to make decisions regarding partial and full mainstreaming. If the child is to be fully

mainstreamed prior to the third year, then the parent is asked to participate in the meeting. In order for mainstreaming to occur, the student must demonstrate oral English proficiency with either the Bilingual Syntax Measure (BSM) or the Bolt; reading must be at grade level as determined by Holt or Laidlaw tests. Parental permission must also be granted.

Once mainstreamed, the TBE teacher monitors student progress on a monthly basis for the first year. Students experiencing difficulties may be returned to the program if deemed necessary by the staff team and the parent.

Students recommended to remain in the TBE Program beyond the third year, do so at the discretion of the school committee and with the parent's permission.

Holyoke Public Schools

Overview

Holyoke is a medium size urban city located in western Massachusetts. The school system has a student body of approximately 6,582 students K-12; about 1,380 of which are in Transitional Bilingual Education Programs (see Table 1). The district offers two types of Bilingual Education Programs, a traditional TBE model, and a two-way model. The traditional TBE Program has been in operation since 1972 and currently services 746 students in grades K-12. The two-way program, which is Title VII funded, has been in operation since 1983 and services approximately 644 students in grades 1-6. This program offers regular TBE classes, and ESL to LEP students and offers Spanish as a second language (SSL) to non-Spanish speakers. All students take classes in computer literacy.

Program Goals

1. To prepare students to compete successfully in a monolingual instructional program.

2. To provide students with the necessary skills to continue on in post-secondary education, and/or to gain meaningful employment.

3. To meet the educational needs of limited English proficient students in the least isolated setting possible.

4. To extend the benefits of bilingual education to the monolingual English speaker through the opportunity to learn a second language.

5. To further student integration and Holyoke's commitment to multicultural education.

Staff Development

Holyoke offers staff development opportunities to all program staff. In-service is on-going and has two major branches:

a. Orientation and basic skill training for newly hired staff and,

b. Continued re-training and up-dating of skills. One half day of in-service training is offered each month. Staff meetings, specialized areas of training, and training in connection with other departments is on-going. All staff are encouraged to participate in professional educational associations.

Curriculum

Curriculum and materials used in the TBE Program are parallel in scope and sequence to the standard Holyoke curriculum, except for the specialized components of ESL, SSL, and the history and culture of Puerto Rico.

A task force developed elementary ESL curriculum was implemented in the 1984-1985 school year and is currently being assessed as to its workability and effectiveness. At the secondary level, the ESL staff is in the process of compiling an ESL curriculum to meet their needs.

Other curriculum efforts have included the development of a Spanish as a second language curriculum, a computer education curriculum for grades 4-6, a K-3 Language Arts Curriculum and an Informal Reading Inventory in Spanish to assist teachers in the determination of appropriate placement of students in the Spanish basal readers. A Scope and Sequence of Skills for Reading in Spanish for grades 1-4 has also been developed along with various other curriculum materials and aides.

Instructional Methodology

a. Two-Way Program

The thrust of the program is consistent with the U.S. Department of Education's stated goal of supporting "programs that strengthen basic and higher level skills in English language and literacy in reading, writing, speaking, and foreign language literacy."

The program is structured as a modified team teaching approach. Each grade level has an instructional team which consists of a bilingual teacher, an English monolingual classroom teacher, and an English as a Second Language (ESL) teacher. Each instructional team works with 45-50 students housed in adjoining classrooms. The students are either limited English proficient, Spanish speakers or monolingual English speakers who are heterogeneously grouped for a portion of the day and homogeneously grouped according to language dominance for a portion of the day. All students are in the program on a voluntary basis with parental encouragement.

Each linguistic group starts by learning the essential skills of reading, writing, and mathematics in the language the child understands best. In addition, each child studies the second language. The Spanish speaking child studies English and the English speaking child studies Spanish. Social Studies and Science are sometimes taught in the child's dominant language and sometimes taught as an integrated activity in English. Special subjects such as Computer Literacy, Art, Music, and Physical Education are integrated activities.

b. Regular Bilingual Programs

The Holyoke Bilingual Program follows the transitional philosophy where the native language and culture are used as a medium of instruction until the student acquires a level of English proficiency which will enable him/her to function at a level with peers in a monolingual classroom. The TBE program strongly adheres to the pedagogical premise that literacy in the native language more easily leads to literacy in the second language.

Students who are non English speaking receive all their academic subjects in their native language and receive oral instruction in ESL.

Students are classified at step levels 1-4, indicative of language proficiency levels and amounts of L1 and L2 instruction.

The program teams a bilingual teacher with an English as a second language teacher for most grades, within one classroom. LEP students receive ESL services daily according to individual needs. Students just entering the TBE program are designated as Step 1, receiving native language and content instruction in the dominant language with daily ESL instruction. An oral/aural approach is used at this level. Depending on the student's level in native language reading, print may be used to reinforce the English language skills developed. As the student gains more proficiency in basic communicative skills, the Language Experience Approach is incorporated into the instructional program in order to prepare students for the transition into a formal reading program in English. As the student's English proficiency increases, the student may be considered for math in English with the ESL teacher.. The process continues for other steps, each meeting the criteria established for placement of students in an appropriate instructional program

Entry/Exit Criteria

Upon entry, LEP students are interviewed and tested with the Bilingual Syntax Measure. Home and school language surveys are also conducted. At the secondary level, the above procedure is conducted by the principal and the bilingual guidance counselor. At the elementary level, bilingual outreach workers or bilingual teachers assist the principals in the interview process. In some special cases, the LAU Compliance Coordinator is asked to conduct the interview Monitoring of appropriate identification and placement is the responsibility of the Lau Compliance Coordinator. Formal individual student reviews are conducted twice a year.

Exit criteria for full mainstreaming are as follows:

1. In order to demonstrate English language proficiency (speaking and comprehension) comparable to native English speaking peers, a student must score:

BSM E Level I - 5

BSM E Level II - 5 or 6

2. In order to demonstrate an English reading level comparable to English speaking peers, a student must score at the grade level equivalent expected for his/her grade on the California Achievement Test.

(It has been the practice of the TBE program not to exit a student from the program who does not have prior experience in a monolingual classroom. As a result, students at Step III and in some cases, step II are partially mainstreamed for one or more academic subjects).

TABLES

TABLE 3

Socioeconomic Status of Sample
by District

District	Percent Free Lunch	Percent Reduced Lunch	Percent Free & Reduced Lunch	Percent Paid Lunch
Attleboro N=15	53%	13%	66%	33%
Cambridge N=28	71%	4%	75%	25%
Framingham N=43	70%	12%	82%	19%
Haverhill N=27	55%	0	55%	44%
Holyoke N=41	90%	5%	95%	5%
Total Percent by Lunch category	68%	7%	75%	34%

N= number of students for whom there was available data

TABLE 4

Average Number of Years in TBE
By District

District	Average years by Grade Level		Overall Average
	1-6	7-12	Years
Attleboro N=16	2	2	2
Cambridge N=25	2	2	2
Framingham N=27	2	1	1.5
Haverhill N=18	2	4	3
Holyoke N=43	2	5	3
Total Average years in TBE	2	3	2

TABLE 5

Attendance Rates By District:
TBE and Mainstream vs. Control

District	Number Days Attended 180-160		160-140		140-120		120 or less	
	TBE MS	C	TBE/MS	C	TBE/MS	C	TBE/MS	C
Attleboro N=22	68%	0	27%	0	5%	0	0	0
Cambridge N=36	70%	80%	19%	20%	4%	0	0	0
Framingham N=46	65%	100%	28%	0	7%	0	0	0
Haverhill N=39	76%	33%	18%	50%	3%	17%	3%	0
Holyoke N=51	70%	20%	20%	60%	9%	0	2%	20%
Total Percent by number of days and sample type	70%	58%	22%	33%	6%	4%	1%	5%

MS= mainstream
C = control

TABLE 6

Average Academic Grades by District
and Sample Type

District	TBE Grade level 1-6	TBE Grade level 7-12	MS Grade level 1-6	MS Grade level 7-12	Control Grade level 1-6	Control Grade level 7-12
Attleboro N=26	B-	B	B-	C+	0	0
Framingham N=46	C	C+	C	B-	D+	*C
Cambridge N=39	B	B-	B+	*C	B-	D+
Haverhill N=39	A-	B	C+	C+	*B	F
Holyoke N=42	B	C	B-	C	D	0
Total Average by Sample type	B	B	B	C+	C	D-

* one student
0 No sample available

Findings by District

Attleboro

Characteristics of the Student Sample

A total of 27 students were included in the Attleboro sample. As illustrated in Table 2, 16 of these students were enrolled in TBE, 11 were previous TBE students now in the mainstream. No control students were available for inclusison in the sample.

The majority of TBE students in Attleboro were evenly divided by place of birth with 31% born in the U.S. 31% born in Puerto Rico, and 31% born in Central America, with only one student (7%) born in South America. Sixty three percent of the TBE students had attended school only in Attleboro, while 33% had attended schools in their native country, and 4% had attended other school districts (see Figure 2). About half of the TBE students were from poor families with 57% receiving free or reduced price lunch.

Attendance for TBE students was good: 62% had, on the average not missed more than 20 days of school each year for the last several years. Foreign born students showed the most frequent absences, 39% averaging about 45 days a year.

Overall academic achievement for Attleboro TBE students was positive, with a B- average for grades 1-6, and a B average in grades 7-12 (see Table 6). Only three students (19%) had an academic grade average of D; no students had any Fs, and just one student had repeated the kindergarten.

Only one student in the TBE sample is receiving reading help in the area of remedial services, however, the student shows an average academic grade of C including reading.

The overall characteristics of the mainstream students were

somewhat similar to that of the TBE sample. Twenty five percent of the students were U.S. born, and 75% were foreign born, with 37% from Central America, 25% from Puerto Rico, and 13% from South America. Only one student attended school in the native country, and only one student attended other district schools, with 82% of the sample attending Attleboro schools only.

Attendance for the mainstream students was very high with 78% of the students missing less than 20 days each per year, and ony two students missing less than 49 days or more. Overall, mainstream students had an academic grade average of B- for grades 1-6, and a C+ average for grades 7-12 (see Table 6). Only two students were receiving remedial services in reading, and one of them had a D grade average. One student was participating in the Gifted and Talented Program and had an academic average of A. Only one student in the mainstream sample had repeated a grade and the retention was due to his late arrival in that school year.

As with the TBE sample, mainstream students had been an average of two years in the mainstream at the time of the study. Only three students had been in the mainstream for more than two years.

There were no control students in the Attleboro sample.

Standardized Test Performance

In Attleboro, test scores were available for four TBE students and ten students in the mainstream. All students were tested with the Comprehensive Test of Basic Skills (CTBS) in English. TBE students were tested in math only; most mainstream students were tested in both math and reading.

Three out of the four TBE students were new to the district and were tested one month after being placed in the fourth grade TBE program. One scored at grade level, one near grade level, and the third one and a half years behind grade level. The fourth TBE student was in the fifth grade when tested and had been in Attleboro five years. This student scored five months above grade equivalency.

Performance for mainstream elementary students was overwhelmingly positive, with two students (second and fifth grades) scoring considerably above grade level and three students (second and fourth grades) scoring on grade level. Test scores for the fifth grader were particularly noteworthy: five years above in reading and one year above in math. This finding goes counter to national trends, to trends in other districts for fifth graders and to the test scores of two other fifth graders in Attleboro, one of whom scored about three months below in reading and seven months in math and the other whom was over two years behind in both subject areas. Average growth for elementary students was over two years between 1983-84 and 1984-85. The one fifth grader with exceptionally high performance showed a growth of five and a half years in this one year time period.

At the secondary level, both students tested (eighth graders) were four years and two and a half years behind in reading and a half a year and two years behind in math. Both students, however, had shown an average yearly growth of two years in reading and in math.

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CAMBRIDGE

Characteristics of the Student Sample

A total of 41 students were included in the Cambridge sample. As shown in Table 2, 25 of these students were enrolled in TBE, five were previous TBE students now in the mainstream, and 11 were decribed as control.

In Cambridge, a majority of the TBE population are recent arrivals with two years the average amount of time enrolled in the bilingual program (see Table 3). In contrast to other districts, 56% of the TBE sample were born in Central America, 20% in South America, 12% in the Dominican Republic and 12% in the United States. Seventy five percent of the foreign born students had attended school in their own country before coming to the U.S. Once students arrive to the U.S., they appear to be fairly stable with just two TBE students having attended schools in another district. Only 20% had attended more than one school in Cambridge. In all cases these were high school students who had previously attented a junior high school. Most TBE students were from poor families with 71% receiving free or reduced lunch (see Table 4).

Attendance for TBE students was high: 77% had, on the average, not missed more than 20 days of school each year for the last several years. U.S. born TBE students showed the most frequent absences, averaging about 50 days a year.

Overall academic achievement for Cambridge TBE students was positive with a B average in grades 1-6, and a B- average in grades 7-12 (see Table 6). Only three students (12%) had an academic grade average of D; 24% had grades of D or F in one or two subjects, most

often in English.

Twenty percent (5 students) of the TBE sample had required remedial services: one student in counseling, one in Chapter 1, and three students in special education. (Two of the special education students were included in the 24% who had low grades).

In examining the three students receiving special education services, some interesting comments can be made. At the time of the study, all three students had been enrolled in the TBE program in Cambridge longer than the two year average. Two of the students, currently in third and sixth grades, had been in TBE three years. The third, now a junior in high school, had been in the program since grade seven, or a total of 4 years.

For the elementary students, other factors are also worthy of note. The sixth grader, for example, was born in Central America and attended and repeated grade one there. When he arrived to Cambridge he was enrolled in grade three after never having attended second grade. His core recommends a small instructional setting. The third grade student was born in the United States but attended kindergarten in Puerto Rico. His attendance in Cambridge has been poor and he is currently repeating grade three. According to records, he was recommended for a core because of disruptive behavior, poor retention, and because he was achieving below grade level. His CTBS scores in Spanish ranked him about a year and a half below grade level in both reading and math.

Trends for mainstream students were somewhat different than those of the TBE sample. Although the small size of the mainstream sample (5 students) make generalizations difficult, individual student characteristics may be of interest.

On the whole, the mainstream sample had been enrolled in TBE two

years before they were mainstreamed. Most had been in the mainstream one year at the time of the study although one student had been there eight years.Ethnic composition and place of birth of these students differed from the TBE sample, with 40% Puerto Rican born, 40% born in the U.S., and 20% born in South America. In contrast to TBE, the mainstream sample included no Central Americans and only 20% had attended school outside the U.S. Sixty percent had attended Cambridge schools only while 20% had also attended schools in other districts. The mainstream students also appeared to be somewhat less well off economically, reflected in the fact that 80% were receiving free lunch.

Attendance for mainstream students was considerably below that of the TBE population, with half absent 40-60 days a year. All students except one were performing above average (B average) in the classroom (see Table 6). However, 60% were receiving remedial services, one in Chapter 1 and two in special education. Both special education mainstream students had been in the TBE program only one year; both individual education plans (IEP) indicated difficulties in communication.

As with the mainstream sample, control students appeared to have been in the U.S. longer than those students studied in the TBE program. Of the 11 students examined, 73% (8) had been in Cambridge schools since kindergarten or first grade. Of the three students who were more recent arrivals, one was from Puerto Rico and two from Central America.

On the whole, most control students had been born in the U.S. (64%), with two born in Central America, one in Puerto Rico and one in South America. Only two had gone to schools in their own countries and one in another district. Most were poor: 86% were receiving free

lunch.

Attendance for control students was high (80%) (see Table 5). Average grades were C, lower than that of the TBE and mainstream sample (see Table 6). While participation in remedial programs was greater for students in the control, 60% was remediation in ESL (#3). Twenty percent (2 students) of the sample were enrolled in special education and were classified as severe learning disabled with references in the IEP's made to their limited English abilities. Both had repeated grades; one student had repeated twice. Grade repetition indeed appeared more prevalent in the control than in TBE or the mainstream with four students of the 11 repeating grades.

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Standardized Test Performance

Test scores were available for 12 TBE students, two mainstream, and one control student. Two of the high school TBE Students were tested with the California Achievement Test (CAT). The remaining TBE students were tested with the Comprehensive Test of Basic Skills (CTBS) in Spanish; two TBE students were also given the English version of the CTBS. Both mainstream students had been tested with the CTBS in Spanish and in English before they were mainstreamed. The control student received the CAT only.

General trends indicate that TBE students at the elementary level tend to be either close to or above grade level in Spanish reading and math. Performance was especially significant in reading at the third, fourth, and sixth grade levels with average scores one year and four months, nine months, and nine months above expected grade equivalents. In math, average scores at these grades were nine months, two months, and three years, eight months above grade level. Average number of years in the TBE program at the time of testing was two years.

Students in grades one and two were below grade level in both reading and math with the average difference being the greatest in math at the second grade level (8 months). These findings are consistent with those of Development Associates (1984) who found early elementary LEP students nationwide to be below grade level in language arts and math.

At the fifth grade level, TBE students were several months behind in reading and considerably behind in math. While research maintains fifth graders show declines nationally in academic achievement, the results reported here may be more reflective of individual students than national trends. Both of the two students had been in U.S. schools only two years when tested. One had repeated grade one in his

native country and, because of political turmoil, had never attended grade two. The second student showed significant gains in reading in grade four (two years, four months above grade level) and was only slightly below level in math. This same student scored five months higher in English math than in Spanish when tested in the fifth grade and is doing well in all his academic subjects with a B average.

Two fourth grade mainstream students were tested while still in the TBE program at the end of the second grade and were found to be at grade level in Spanish and in English reading. In math, they were several months behind in Spanish but approximately four months ahead in English. Since both were receiving math instruction in the mainstream, English rather than Spanish gains should be expected. While updated scores on these students were not available, both have B averages and appear to be succeeding in the mainstream.

Average yearly growth for elementary TBE students varied from six months to over two years. In examining CTBS test scores for 1983-84 and 1984-85, second graders showed an average gain from the previous year of sixth months in reading (two students) and one year seven months in math (one student). Between grade four and five, one student gained a year and six months in reading while a second student lost the same amount in reading and a year and two months in math. (It is these same two students for whom individual cases were discussed above). Between grades five and six, one student gained eight months in reading and two years and four months in math.

While TBE student progress was evident at the elementary level, overall achievement appeared lower at the upper grades. One student tested with the CTBS in grade 8 was two years below in reading and four years and five months behind in math. Testing, however, took place after he had been in the program less than one year with a D

average in 1985 in grade nine. While this may have affected his test score, the student continues to do poorly. Another student tested with the CAT in grade ten scored three years, two months below grade equivalency in reading and one year, four months below in math. Although this student had an A average the previous year, his grades dropped to C in grade ten and, because of lack of credits, he was forced to repeat that year. A third student, tested with the CAT in grade ten was four years three months below in reading and two years, eight months in math. This student was out of school two years before coming to Cambridge in the middle of eighth grade. Of significance is the fact that both these students were tested in English after having been in U.S. schools a year and a half. One would therefore expect them to score below grade level.

Framingham

Characteristics of the Student Sample

A total of 47 students were included in the Framingham sample. As shown in Table 2, 27 of these students were enrolled in TBE, 17 were previous TBE students now in the mainstream, and three were described as control.

In Framingham, a majority of the sample population were born in the United States (53%) with 47% foreign born as illustrated in Figure 1. Of the TBE sample 52% were born in the U.S., 26% in Puerto Rico, 15% in the Dominican Republic, and 7% in Central America. Of the foreign born students, all but one had attended school in their own country before coming to the U.S. Once students arrive to the U.S., they are stable in contrast to the other districts, no TBE students in the sample had attended schools in another district (see Figure 2). Sixty three percent had attended more than one school in Framingham while 37% had attended only one school. Most of the TBE students come from poor families with 78% receiving free or reduced lunch.

Attendance for TBE students was good: 64% had, on the average, not missed more than 20 days of school for the last couple of years. U.S. and Puerto Rico born TBE students show the best attendance with almost all of them (about 55% of the TBE sample) averaging less than 20 days a year.

Overall academic achievement for Framingham TBE sudents was positive. Only one student had a failing academic grade average; 74% had average grades of C, and 22% had an academic grade average of B.

Remedial services were high for TBE students in Framingham; with 56% receiving Chapter 1, two students in Special Education, and one student receiving counseling. (The two special education students were included in the 74% who had a grade C average).

It is significant to note that high participation in Chapter 1 is due, in part, to the fact that Chapter 1 services are also provided in the native language. Students who are behind in math and reading in the native language can thus receive additional assistance through the Chapter 1 program.

The mainstream sample of 17 students had been enrolled in TBE an average of 2 years at the 1-6 grade level and only one year at the 7-12 level, with an overall average of 1.5.

Ethnic composition and place of birth of the mainstream students was as follows: 53% were U.S. born, with 35% Puerto Rican born, and 12% born in Central America. In contrast to the TBE sample, the mainstream sample did not include any students from the Dominican Republic. A total of 73% had attended Framingham schools only, while only three had attended more than one school. The mainstream sample appeared to be less well off economically, with 86% receiving free or reduced lunch.

Attendance for mainstream students was almost identical to the TBE sample. Sixty three percent of the students did not miss more than 20 days per year; 37% missed between 20 and 40 days per year. The grade academic average for mainstream students were slightly better in the upper grades. Grades 1-6 had an average grade of C, and 7-12 an above average of B- (see Table 6).

In the Framingham sample there were only three control students, two at the elementary, and one at the secondary level. Two of the students were U.S. born and one from Central America. The Central American student had attended a bilingual program there for 3 years, and appeared to be doing better than the other two students in the sample.

Attendance was good for all three students. On the average they

missed less than 20 days each per year (see Table 5). One of the U.S. born control students was core evaluated because of difficulties related to language. The other U.S. born student was also assessed for speech problems, according to records. Two of the three students have attended more than one school in Framingham. All three have been in school a relatively short period of time (less than 3 years).

Academic grade average for the control students has much lower than the TBE and mainstream sample with a D+ for elementary grades 1-6 and C for secondary grades 7-12 (see Table 6). Remediation services for the control student sample was 100%, all receiving, Chapter 1 and/or speech, and two receiving ESL.(#4) Two out of the three were students from poor families and receiving free lunch.

Standardized Test Performance

Test scores were available for 14 (grade 2-9) mainstream students and one control (seventh grade) student. All students were tested with the SRA in English.

Results appeared to vary greatly. A first grade student scored approximately nine months above grade equivalency in reading while a second grader scored almost two years above expected grade level in reading but was slightly below in math.

Eight mainstream students were tested in the fourth grade, with five of them having been in the mainstream only one month at the time of testing. As might be expected, all newly mainstreamed students scored between one and three years below grade level in reading and one and two years below in math. The remaining three students had been in the mainstream one year. Two scored close to or slightly above level in reading, while the third was two years below. In math, results varied with one student scoring nine months below, one student scoring over two years above, and the third two years below.

In the seventh grade, two mainstream students were tested and both scored an average of three years below grade level in reading and a year and a half below in math. One of these students, however, had been in the TBE program less than a year before mainstreaming.

Only one student showed test scores for more than one year. This student was tested in grade seven and again in grade eight and showed remarkable performance both times. In grade seven, this student scored two years above level in reading and five years above level in math. One year later, she again scored three years above level in reading and over four years above level in math.

The one control student was tested in the fifth grade after only four months in the district. This student scored three and a half years below level in reading and eight months below in math.

HAVERHILL

Characteristics of the Student Sample

A total of 43 students were included in the Haverhill sample. As illustrated in Table 2, 18 of these students were enrolled in TBE, 18 were previous TBE students now in the mainstream, and seven were described as control.

In Haverhill, the TBE sample has been in the program an average of two years for grades 1-6, and an average of four years in grades 7-12 (see Table 3). Thirty seven percent of the student sample was U.S. born, and 62% foreign born. Of the foreign born, 31% were born in Puerto Rico, 19% in the Dominican Republic, and 12% in South America. Twenty four percent of the overall sample in Haverhill had attended school in their own country (see Figure 2). However, 39% of the TBE sample had attended school in their native country, 17% had attended schools in other cities, and 44% had attended schools only in Haverhill.

Attendance for the TBE students was good: 64% had, on the average, not missed more than 20 days of school each year, 29% had, on the average, missed 40 days each year, and 7% (one student) had missed 50 days or more.

The overall academic achievement for Haverhill TBE students was very positive. Students in grades 1-6 had an average grade of A-, while students in grades 7-12 had an average of B (see Table 6). Thirty three percent of the TBE sample required remedial services: one student receiving special education, three receiving Chapter 1 services, and three receiving Migrant Education. The special education student was being treated for emotional problems.

The overall length of time in TBE for Haverhill was two years for grades 1-6, four years for 7-12, and 3 years overall (see Table 3).

Overall characteristics of mainstream students were similar to the TBE sample. Half of the students were born in U.S. and half were foreign born. Of the foreign born, 38% were from Puerto Rico, 6% from Central America, and 6% from the Dominican Republic. Only two students (12%) had attended schools in their native country, and 18% had attended schools in other districts, with 70% of the sample attending Haverhill schools only.

Attendance for the mainstream students was very high with 88% of the sample, missing less than 20 days each, per year. Only 2 students had missed more than 40 days each, per school year. Overall academic average for mainstream students was good, with a C+ average for both 1-6 and 7-12 grade levels (see Table 6). Seventy eight percent of the mainstream students were receiving remedial services: 22% were receiving Chapter 1 services, 56% Migrant Education, and 22% remedial reading. Twenty two percent of the mainstream students (4) had repeated a grade. Of these, two were receiving speech at the time. One had been cored for learning disabilities, and one had been cited for a behavior problem.

As with the TBE sample, the mainstream students tended to have been an average of three years in the mainstream at the time of the study. Only three students had been in the mainstream more than four years.

Overall characteristics for the several control students sampled, are as follows: 71% of the students were U.S. born with 80% of them from New York City. The remaining 29% were born in Puerto Rico. All students (100%) had attended schools in other districts, and 29% had attended schools in their native country.

Attendance for the control sample was poor only 33% had missed less than 20 days per year. Fifty percent had missed more than 40

days per year, and 17% had misssed more than 60 days per year (see Table 5).

Overall academic achievement for Haverhill control students was also poor. Eighty six percent of the students had an average grade of F, while only one student (14%) had a B average (see Table 6). Most control students (71%) were receiving remedial services. Of these 60% were receiving Chapter 1, 60% Migrant Education, and one student was identified as special needs.

Standardized Test Performance

Test scores were available for one TBE, 12 mainstream, and six control students. All of the students were tested with the Stanford Achievement Test (SAT) in English. Results, however, were difficult to interpret.

The one TBE student, for example, had attended schools in New Hampshire and came to Haverhill's program in the fourth grade. After only six months in the program, he was tested (in English). As may be expected, his scores were well below the grade equivalencies of native English speakers: two years behind in reading and one year and seven months behind in math.

Similarly, mainstream students', results were not always reflective of students' abilities. Six mainstream students tested in grade three scored an average of one year and three months behind in reading and one year six months behind in math grade equivalencies. Two of these students had been in mainstream classes between one and two years but both were also receiving special education services and had repeated grades. The other four students had been in the mainstream only one month at the time of testing. Another mainstream student tested in grade five was one year below appropriate grade equivalency in reading and only three months below in math. However, this student had also been in special education, having received speech therapy for four years at the time of testing. Sixth grade test scores averaged two years behind in reading and one year and four months behind in math but, as with the previous cases, other circumstances appeared to effect performance. One student had been prematurely mainstreamed after only six months in TBE and is now a recepient of special education. A second student, mainstreamed after

two years, is receiving remedial help in reading while the third was closer to grade level, scoring one year behind in reading and only three months behind in math.

Control students' scores were well below grade level and for the most part, were demonstrative of students' current academic progress. One student, for example, was tested in grade nine after having failed a large number of subjects and repeating a grade. This student scored nine months below equivalency in reading and two years behind in math.

The two students tested in grade six were in the district only one month at the time of testing. One student scored three years, four months below in reading and two years and three months below in math. His report card from the previous district showed low grades and several F's. The other sixth grade student was also well below that expected, scoring two years and seven months below in reading and a year and four months below in math.

The seventh and eighth graders tested also averaged between two and three years behind in reading and about a year behind in math. Both had low and failing grades and one had also repeated a grade.

HOLYOKE

Characteristics of the Student Sample

As Table 2 illustrates, a total of 55 students were studied in Holyoke. Forty three of these students were enrolled in TBE, seven in the mainstream, and five were considered control. All were Puerto Rican.

At the time of the study, the TBE students had, on the average, been enrolled in the program three years (see Table 3). At the elementary level, average enrollment time was two years, however, students in grades 3-6 were more likely to have been in the program three years. Average number of years in grades 7-12 was five.

Of those TBE students for whom birth data was available, 56% were born in Puerto Rico and 44% in the U.S. Most had been highly mobile. Twenty three percent had attended school in Puerto Rico but of these 40% had moved frequently, going back and forth to Puerto Rico several times and/or moving between Puerto Rico and other school districts in the U.S. An additional 23% had attended schools in other cities and 73% had attended more than one school in Holyoke. Virtually all were poor, with 97% receiving free or reduced lunch (see Table 4).

Average attendance for the Holyoke TBE sample was between 160 and 180 days a year. Only 36% demonstrated poor attendance (less than 160 days).

Overall, elementary TBE students (grades 3-6) were performing above average (B) (see Table 6). Only five students out of 35 had obtained a grade lower than C in an academic subject. Three students had repeated grades. At the high school level progress was not as positive. Out of eight students, one student was failing and another three students had F's and D's. Three of the four had been in TBE between five and six years.(#5)

Most TBE students were receiving remedial services at the time of the study, 85% of these in Chapter 1.(*6) Seven percent had been referred for special education.

Mainstream students exhibited most of the same characteristics as those in TBE, including academic success. Before being mainstreamed, students tended to spend four years in the TBE program. At the time of the study, all had been in the mainstream only 1 year .

Fifty seven percent were born in Puerto Rico, 43% in the U.S. Mobility was less than that of the TBE sample, with 57% having attended Holyoke schools only, 14% schools in Puerto Rico, and 29% schools in other districts. Most received free or reduced lunch (86%). All had high attendance.

Remediation appeared to be primarily as a support type service for mainstream students, with 57% participating in Chapter 1. One student had been receiving counseling through special education for the last five years.

Academic performance of mainstream students was highly positive (see Table 6). Average grade was a B-; one student had an A average and was enrolled in advanced reading. Most performed close to or above grade level in the California Achievement Test. (see Standardized Test Performance below).

In contrast to the TBE and mainstream students, control students demonstrated poor attendance, low grades, and overrepresentation in special education. Eighty percent had repeated grades.

Of the control sample, 80% had been born in the U.S. and 20% in Puerto Rico. All were in grades 1-3 at the time of the study and had attended schools in Holyoke only. Eighty percent had poor attendance, with one student absent between 60 and 80 days (see Table 5). Forty percent had been referred for special education; IEP's all made

reference to students' inabilities to perform classroom work in English. Average academic grade for the control was C-.(see Table 6). Four of the five students had repeated grade one.(*7)

Standardized Test Performance

Test scores were available for 20 (grade 3-12) TBE students and all seven of the mainstream students. No control students appeared to have been tested. All students were tested with the Comprehensive Test of Basic Skills (CTBS) in Spanish and/or the California Achievement Test (CAT) in English.

TBE students tested in grades three and four scored approximately one year below their respective grade equivalents in both Spanish reading and Spanish math.(*8) Two of these students, partially mainstreamed in 1984-85, scored approximately the same in both the CTBS and CAT.

At the fifth grade level, TBE students averaged about two years behind in Spanish reading and a year and four months behind in Spanish math. In English reading, all the fifth graders scored about the same as they did in Spanish. In English math, however, they performed much better, averaging only about four months below their grade equivalent. Moreover, one student even scored six months above that expected for her grade and month.

Sixth grade TBE students also scored approximately two years below grade equivalent in Spanish reading and, in Spanish math. Those students partially mainstreamed showed significantly better performance in English math (six to eight months) but varied in their English reading scores, with two students showing more proficiency in Spanish (7 months and one year difference) and one more in English (7 months higher).

At the secondary level, student performance varied with students

doing better in reading than in math. In grade nine, Spanish reading performance was a little over a year behind; in math, it was over two years behind. Grade ten Spanish reading performance was four and a half years below grade equivalency for one student while English reading was a year and four months behind for another. Scores in Spanish math were low for the former students; three years behind, but even lower for the latter in English, five years below appropriate grade. Both students had failing grades.

Mainstream students' test scores were, for the most part, demonstrative of academic success. Two students, one tested in grade three and one tested in grade five, scored significantly above grade equivalents: the third grader a year above in both reading and math and the fifth grader slightly above in reading and three years above in math. Both had maintained good grades (between A and B) while in TBE and one now had a B+ average and the other a C in the mainstream. Another student, tested in grade four after only a half year in the mainstream, scored only several months below grade equivalencies in both reading and math. According to teacher comments, this student is in advanced reading is doing excellent work in the mainstream, and has an A average.

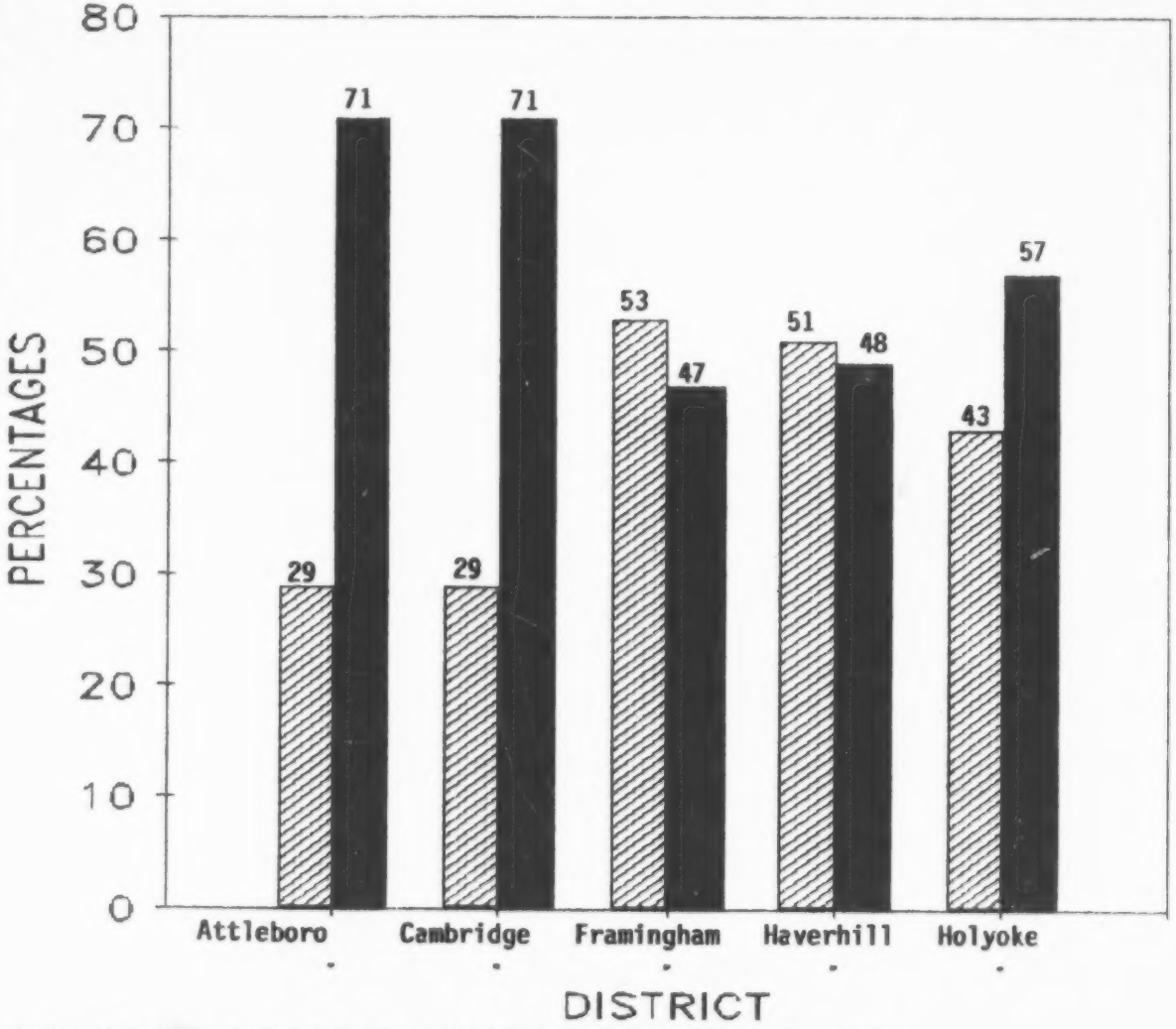
Two other mainstream students tested in grade five performed about two years below level in math and two years and one year four months behind in reading. While both students had an average academic grade of C, both had also received D's in English. Two students tested in grade six were found to be performing at expected grade equivalencies.(#9)

Average yearly growth for TBE students was one year and three months in both reading and in math. In analyzing growth rates over grades, it was found that TBE students showed the least growth

(average one month) in English reading between grades four and five and the most growth between grades three and four (average two years). One of the mainstream students who when tested was enrolled in TBE, also fit this pattern. (#10)

Growth was also greater than the average at the high school level with one student attaining a year and a half in English reading and two years, four months in English math and another student gaining two years in Spanish reading and a year and seven months in Spanish math.

STUDENT SAMPLE BY PLACE OF BIRTH



* Foreign born = Puerto Rico, Central America, South America

Fig. 1

COMPOSITION BY PLACE OF BIRTH*

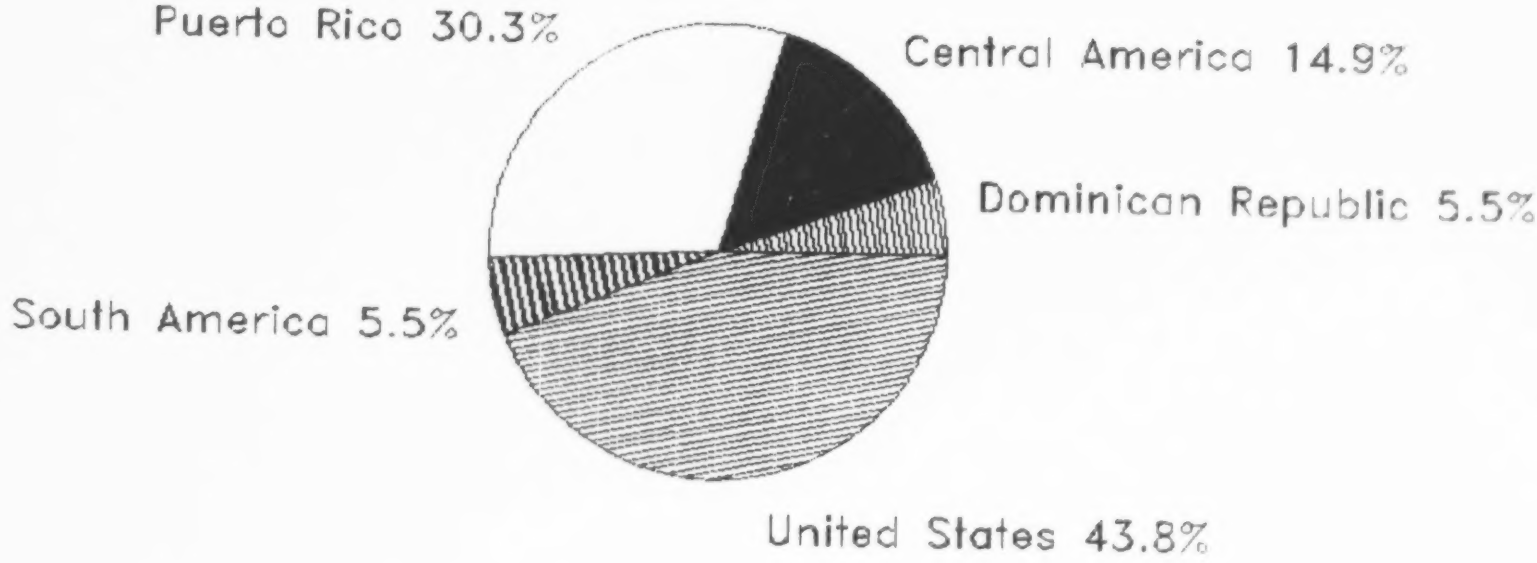


Fig. 2

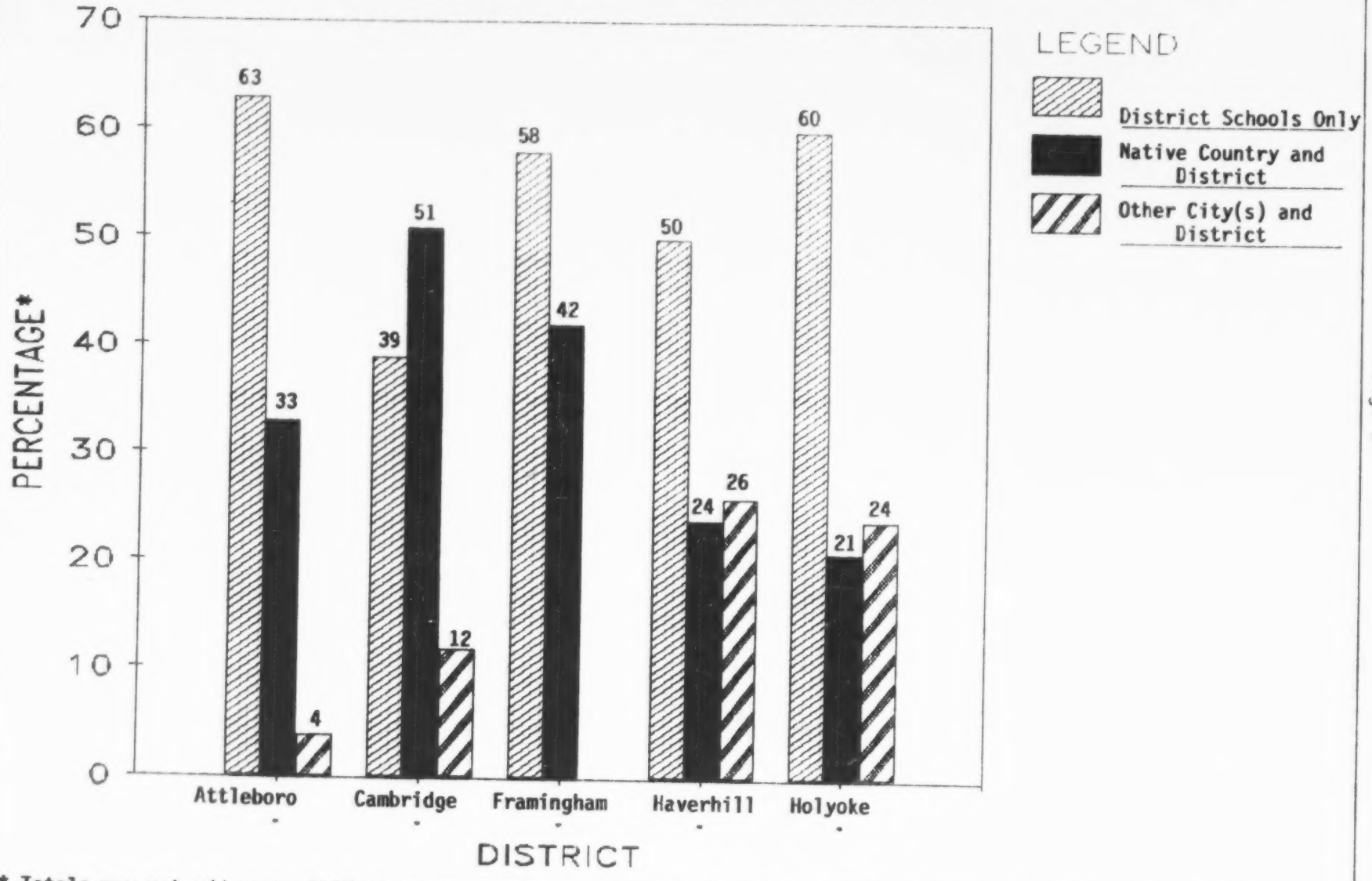


Fig. 3

* Totals may not add up to 100% since some students attended schools in native country, district, and other cities.

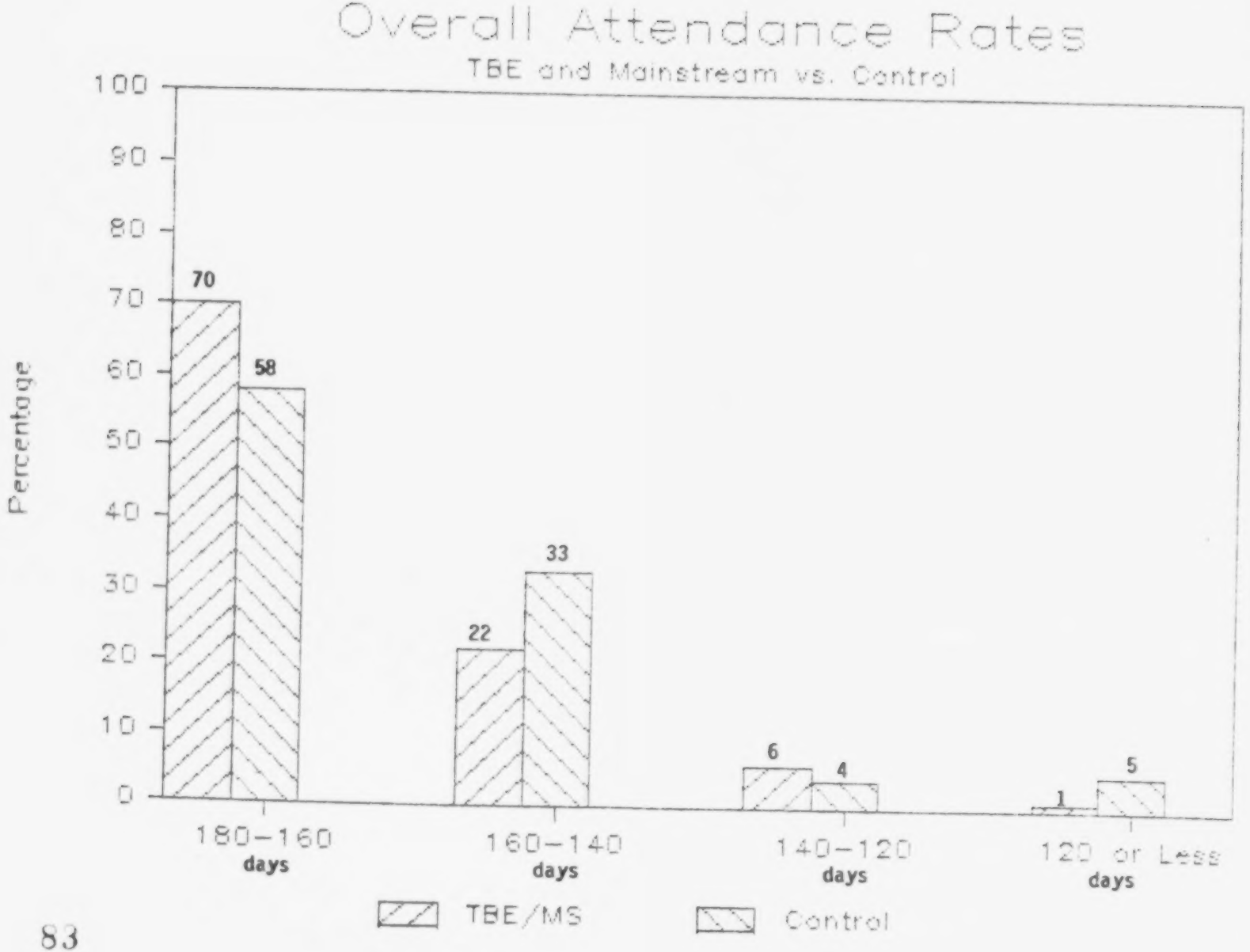

Overall Attendance Rates
TBE and Mainstream vs. Control
Percentage
100
90
80
70
60
50
40
30
20
10
0
70
58
22
33
6
4
1
5
180–160 days
160–140 days
140–120 days
120 or Less days
TBE/MS
Control

Fig. 4

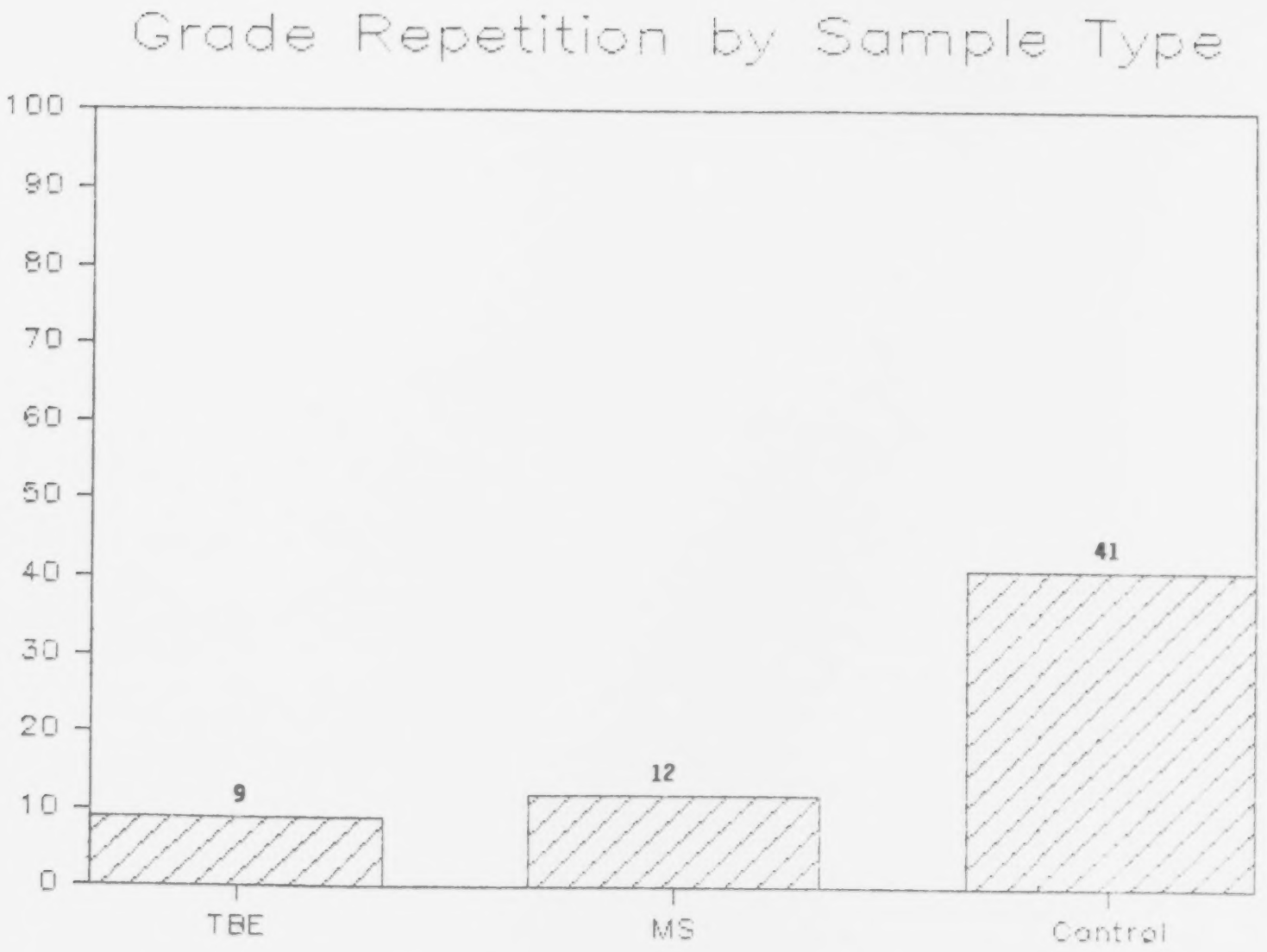

Grade Repetition by Sample Type
Percentage
100
90
80
70
60
50
40
30
20
10
0
9
12
41
TBE
MS
Control

Fig. 5

Discussion and Conclusions

Trends from the five districts indicate that TBE students and mainstream students are much more successful in school than are LEP students who have never been served by TBE programs (control students).

As Table 5 demonstrates, TBE and mainstream students had a 12% higher attendance rate than did control students (also see Figure 4). This finding coincides with that of Troike (1978) who found LEP students in bilingual programs nationally to have a 10% better attendance rate than their peers in monolingual programs.

TBE and mainstream students also had better academic grades, averaging B as compared to the control students' average of D+ (see Table 6). Control students frequently repeated grades (41%) whereas only 9% of the TBE students and 12% of the mainstream students had repeated (see Figure 5). Controls were also much more apt to end up in special education - 26% had been referred for special education and in all cases, this referral appeared to be language related.

Test score performance varied widely by grade and by district however, certain trends were evident. Elementary TBE students, for the most part, averaged about a year below grade equivalency in reading and slightly less than a year in math. Cambridge elementary TBE students, however, scored on or above grade level, exhibiting higher scores in reading than in math. This higher performance might be attributable to several possible reasons: (1) students' place of birth and previous schooling, (2) Cambridge's elementary literacy program, and/or (3) Cambridge's Language Continuum.

Development Associates (1984) and Troike (1978) maintain foreign born students perform better academically than students born in the U.S. (see "Overview of Literature"). As noted in the "Findings by District", 88% of the Cambridge TBE students were born outside the

U.S.; 75% of these students had attended school in their own country. This is in contrast to Holyoke, for example, where 56% had been born in Puerto Rico but only 23% had attended school there. Of this 23%, 40% had demonstrated high mobility moving frequently between the U.S. and the island. None of the Cambridge students had been born in Puerto Rico and all were stable once they arrived to Cambridge.(*10)

For the past several years, Cambridge has offered both TBE and mainstream elementary students a strong experiential based literacy program in English and, for the TBE students, in the native language. Because mainstream students' scores were also high, it is possible this program helped to increase students' reading performance.

Cambridge's Language Continuum Checklist is given to TBE students twice annually (pre and post test) to test students' language proficiency as well as language related and literacy skills. This checklist provides teachers with an overview of students' skills thereby assisting them with designing appropriate instruction. It could be that this instruction improved students' achievement.

Performance on standardized tests for TBE secondary students was poor, with students in both Cambridge and Holyoke averaging about two years below grade equivalencies. While no solid evidence exists to suggest reasons for this low performance, age may have played a factor since many of the students were well beyond chronological age - grade placement (both Development Associates, 1984 and Krashen, 1979 cite age as a possible factor in performance).

Mainstream students in Holyoke and in Cambridge showed the best overall and most consistent achievement with the majority performing on or above grade level. As discussed in the "Findings by District" sections, fifth grade students in both districts (as well as in the other sites) demonstrated a tendency to decline; growth between fourth and fifth grade for these students averaged only two to three months.

In general, mainstream students performed closer to grade equivalencies than did TBE students. Average yearly growth was about two years. Performance was highest for those students who had been in TBE no less than two years. It seems that once they developed a base in their native language (through TBE instruction), they were able to transfer these skills to English and, within a short period of time, achieve at a level comparable to native English speakers.

Mainstream students at the secondary level demonstrated test performance similar to that of those in TBE. Although they were well below grade level equivalencies, students continued to show an average yearly growth of two years. Because many of these students had only been in the mainstream a short time, it is possible they had not had a chance to "catch up" with native English speaking peers. While it might be argued that these students' performance is reflective of trends nationwide which show that Hispanic students tend to fall further behind grade norms with each consecutive year they are in school (see "Overview of Literature"), their performance was considerably better than that of students in the control.

Although overall standardized test performance was positive for TBE and mainstream students, the scores of LEP students never in bilingual programs (control students) displayed the greatest discrepancy from that of native English speakers. On the whole, control students performed three years below grade equivalencies.

As the data presented in this study shows, TBE programs in Massachusetts provide Hispanic LEP students with understandable instruction, a transition to English, and help them do well in school. When LEP students are not afforded the opportunity of TBE, the results are obvious - they fail.

Implications And Recommendations

The recommendations are designed to assist all levels of administration in improving program services to limited English speaking children. Some apply to local school districts at large, others to the State Department of Education, and some will be of specific interest to the districts that participated in this study.

(1)One frequent difficulty that occurs for LEP students is the frequency of core evaluation with subsequent referrals to special education services on the basis of language related problems.

Recommendation : There is a critical need to address and begin to improve the ability of school districts to properly assess the language development of LEP students outside the special education Individual Educational Plan (IEP) process. Coordinated leadership, technical support, and human and material resources must come from the State Department of Education and the Legislature.

(2)While the study found that test score performance varied among the five districts (see results for Cambridge under the Discussion section), one particular district appears to have student performance at higher than expected levels.

Recommendation : The State Department of Education with the cooperation of the school districts studied that demonstrate positive results should collaborate to disseminate these findings for possible adaptation in other school districts.

(3)Data on TBE students now in the mainstream was difficult to ascertain.

Recommendation : In order to continue to measure success or failure of students that have gone through TBE programs, better data management systems are needed by districts operating TBE programs.

(4)TBE student performance and instructional design appeared to be much stronger at the elementary than secondary level.

Recommendation : Secondary TBE program design, staffing, and implementation needs to be monitored much more closely. Resources should be provided to districts to assist in the strengthening of the secondary component.

(5)Although the basic goal of all programs is to prepare TBE students to perform successfully in the ordinary classroom, the implementation of this goal varies widely.

Recommendation : This apparent flexibility of program design needs further study. Definition of the different types of programs is needed to extrapolate the essential elements for effective LEP instruction.

(6)The test and grade performance data examined in this study suggests that LEP students that enter TBE and are transferred or mainstreamed after an average of three years, do better academically than LEP students prematurely mainstreamed and they do much better than those who never participated in TBE.

Recommendation : There is a need in Massachusetts to initiate controlled research on TBE program effectiveness, possibly including either some or all of the issues this preliminary study addresses.

NOTES

1 It is hoped that a later phase of this study will examine these variables from the perspective of the participants themselves, ie., teachers, students, and parents, and will encompass a material review and classroom observation. Due to time constraints, this was not possible in this preliminary analysis.

2 The Language Continuum Instrument was developed by the Cambridge Program from 1979-81 in order to establish better testing procedures and to attain more accurate language and curriculum placements. Scoring is done through an individualized skills checklist that provides teachers with a framework for determining student competence and functioning in each area. The Instrument has served a variety of program needs and is supported by a curriculum that is scoped and sequencial.

3 In September 1985, Cambridge established ESL Centers in several city schools where there were no bilingual education programs (See District Profile). Thus, when parents enroll their children in Cambridge for the first time, they have the option of choosing the Longfellow School, which houses the Spanish Bilingual Program, or choosing another city school which has an ESL Center. At ESL Center schools, LEP students receive between one and ten hours a week of supplemental ESL services. Academic content area instruction is conducted in the mainstream.

4 Although control students are enrolled in the monolingual (English) curriculum, those identified as LEP are monitored by the TBE program and, depending on school location, are offered minimal ESL support.

5 According to the TBE Director, most efforts at program improvement and student monitoring have been at the elementary level.

6 Holyoke offers Chapter 1 services in both English and Spanish depending on students' needs.

7 Although the small control sample size makes generalizations difficult, the fact that none of the control students are succeeding is in and of itself, highly significant.

8 The one mainstream student tested in grade four scored only four months below grade level.

9 Both these patterns for fifth and sixth grade mainstream students coincide with national trends and with findings for Cambridge (see "Standardized Test Performance", Cambridge).

10 Comparison data was not available for Spanish reading and math.

11 Although Puerto Rico is considered to be a Commonwealth of the U.S., issues of language and culture differentiate schooling in Puerto Rico from schooling in the U.S. While the data analysis presented here treats Puerto Rico as a foreign country, years of colonialism have had their effect on the Puerto Rican educational system as well as on its people thus distinguishing it from the Dominican Republic and countries in Central and South America.

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